

19



Europäisches Patentamt
European Patent Office
Office européen des brevets



11 Veröffentlichungsnummer: **0 508 308 A3**

12

EUROPÄISCHE PATENTANMELDUNG

21 Anmeldenummer: 92105701.4

51 Int. Cl.⁵: G05B 19/417

22 Anmeldetag: 02.04.92

30 Priorität: 04.04.91 JP 71488/91

43 Veröffentlichungstag der Anmeldung:
14.10.92 Patentblatt 92/42

64 Benannte Vertragsstaaten:
DE GB

66 Veröffentlichungstag des später veröffentlichten
Recherchenberichts: 30.12.92 Patentblatt 92/53

71 Anmelder: HITACHI, LTD.
6, Kanda Surugadal 4-chome
Chiyoda-ku, Tokyo 100(JP)

72 Erfinder: Ohashi, Toshihiro
4-4-504, Chigasaki-2-chome
Chigasaki-shi(JP)
Erfinder: Arimoto, Syoji
Arusu Kamakura Ueki A-904, 19-2, Ueki
Kamakura-shi(JP)
Erfinder: Miyakawa, Seli
79, Maokacho, Totsuka-ku
Yokohama-shi(JP)
Erfinder: Hayakawa, Mitsuharu
9-19, Honcho-3-chome
Konosu-shi(JP)

74 Vertreter: Altenburg, Udo, Dipl.-Phys. et al
Patent- und Rechtsanwälte
Bardehle-Pagenberg-Dost-Altenburg
Frohwitter-Gelssler & Partner Postfach 86 06
20
W-8000 München 86(DE)

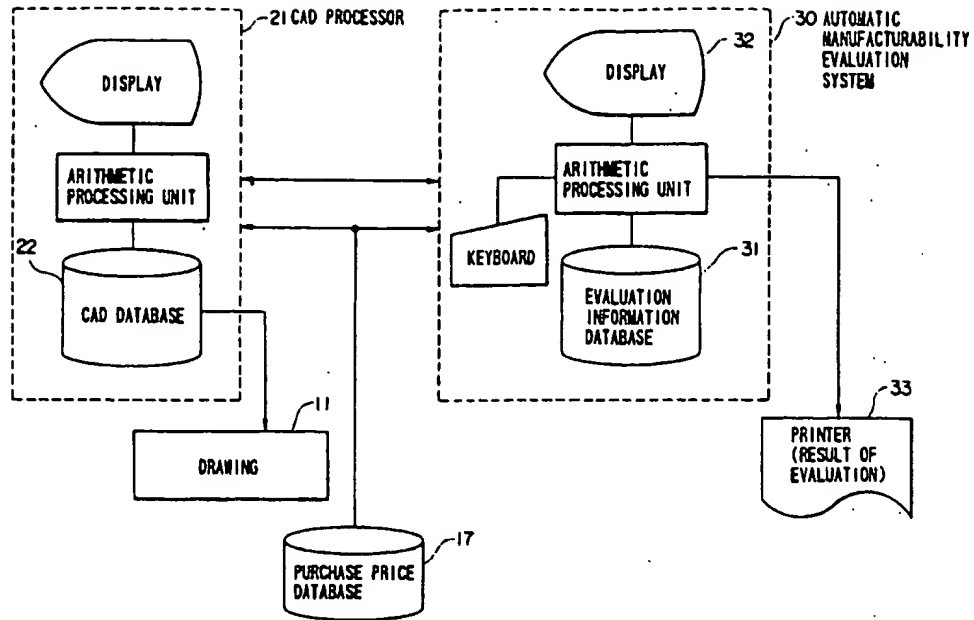
54 Verfahren und Vorrichtung zur Beurteilung von automatischen Herstellungsmöglichkeiten.

27 Automatic manufacturability evaluation method and system (30) for automatically evaluating quantitatively on the basis of design information (22) created by using a CAD unit (21) whether a structure of a product as designed is easy to manufacture or assemble, for the purpose of increasing productivity of the product. With the aid of a processing unit such as CAD (21) and an information processing system

(30) for evaluating manufacturability such as assemblability and processability, an assembling order, assembling method, processing method and others are estimated. On the basis of the results of the estimations, optimal assembling order and method, optimal processing method and others are determined, the results of which is outputted, as occasion requires.

EP 0 508 308 A3

FIG.2





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 92 10 5701

Page 1

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	TECHNISCHE RUNDschau vol. 78, no. 45, November 1986, BERN CH pages 16-21,23,25 R. BASSLER & T. SCHMAUS * page 23, column 1, paragraph 2; figures 9,11 *	1,11	G05B19/417
Y	SOVIET ENGINEERING RESEARCH vol. 3, no. 3, March 1983, GB pages 46 - 51 YU. M. SOLOMENTSEV & V.V. KUZMIN 'PRINCIPLES OF CONSTRUCTING AN AUTOMATED SYSTEM FOR ASSESSING THE MANUFACTURABILITY OF MECHANICAL COMPONENTS' * the whole document *	1-20	
Y	PROCEEDINGS OF MANUFACTURING INTERNATIONAL 1990 vol. 1, March 1990, USA pages 213 - 218 U.P. KORDE ET AL * abstract *	1-7, 10-16,20	
Y	PROCEEDINGS 1990 IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION May 1990, USA pages 1756 - 1762 B.R. DONALD & D.K. PAI * abstract *	8-9, 17-19	G05B
A	9TH PROCEEDINGS OF NAT. COMP. GRAPHICS ASSOC. (NGGA) 1988 vol. 3, 1988, USA pages 55 - 109 P. VILLERS * page 58, paragraph 4 - page 59, paragraph 2 *	1-20	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 OCTOBER 1992	Examiner MOYLE J.F.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons Δ : member of the same patent family, corresponding document			

EPO FORM 1500 (Rev. 10/91)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 92 10 5701

Page 2

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	ROBOTICS AND COMPUTER INTEGRATED MANUFACTURING vol. 4, no. 1-2, 1988, OXFORD GB pages 69 - 76 V.R. MILICIC & M. UROSEVIC * the whole document * -----	1-20	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 OCTOBER 1992	Examiner MOYLE J.F.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- Δ : member of the same patent family, corresponding document	